DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES Office of Structural Materials

Quality Assurance and Source Inspection

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Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary **Report No:** WIR-014541

Address: 333 Burma Road **Date Inspected:** 26-May-2010

City: Oakland, CA 94607

Project Name: SAS Superstructure **OSM Arrival Time:** 700 **OSM Departure Time:** 1900 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV

Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

CWI Name: CWI Present: Yes Chen Shi Gang No **Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No N/A N/A **Electrode to specification:** Yes No Weld Procedures Followed: Yes No N/A **Qualified Welders:** Yes No N/A **Verified Joint Fit-up:** Yes No N/A N/A Yes N/A **Approved Drawings:** Yes No **Approved WPS:** No Yes No N/A **Delayed / Cancelled:**

34-0006 **Bridge No: Component:** Bay 9

Summary of Items Observed:

On this day Caltrans OSM Quality Assurance (QA) Inspector Christopher D'souza was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhen Hua Port Machinery Company (ZPMC) at Chang Xing Island in Shanghai, China. QA Inspector observed and/or found the following:

Bay 9

Welding of Continuity plates on DP3106 – 001 and DP3100 – 001

This QA Inspector observed ZPMC welding personals identified as 059443 performing Flux Cored Arc welding (FCAW) on DP3106-001 U-rib internal stiffeners. ZPMC QC is identified as Zhu Zhong Jie. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2133 and WPS – B – T – 2233 – Tc – U4b -F(CJP)

This QA Inspector observed ZPMC welding personals identified as 059416 performing Flux Cored Arc welding (FCAW) on DP3100-001 U-rib internal stiffeners. ZPMC QC is identified as Zhu Zhong Jie. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2133 and WPS – B – T – 2233 – Tc – U4b -F(CJP)

Tack Welding

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This QA Inspector observed ZPMC welding personals identified as 059472 and 059446 performing Gas Metal Arc welding (GMAW) tack welding on DP3081-001 (PL 3177A) deck plate to U-rib. ZPMC QC is identified as Zhang Qiao. The welding variables recorded by QC appeared to comply with the WPS-345-B-T-2342 U5b (U-Rib).

Gantry Welding

This inspector performed In- Process inspections of production welding of deck panels in Bay 9. Welding was being performed on panel DP3073-001. The weld procedure was found to be WPS-B-T-2342-U1-(U-rib)-5. The welding operators were identified as follows:

Weld 3-059416 Weld 4-201788

ZPMC and ABF QC were present during the welding process and identified as Chen Shi Gang and Cao Haizhou respectively. The ZPMC CWI was present during the welding process and identified as Chen Shi Gang.

During Submerged Arc Welding (SAW) cover pass, the welding parameters were verified by this inspector and were as follows:

Head 3, Weld 3-68.5 Amps, 25.0 Volts Head 4, Weld 4- 68.4 Amps, 24.1 Volts

Bay 12

This QA Inspector observed ZPMC personnel excavating rejected areas on DP3117-001 U-rib to deck plate weld by grinding. These areas were rejected by Phased Array Ultrasonic Testing (PAUT), excavation was performed in the following Y – location

Weld 1 – 4250mm, 6650mm, 11150mm Weld 2 – 2450mm, 5450mm, 6650mm, 7250mm, 7850mm, 9650mm, 13850mm

This QA Inspector verified the depth of the excavations and was found to be compliant with the repair requirement.

Unless otherwise noted, all work observed on this date appeared to be in general compliance with the applicable contract documents.

Summary of Conversations:

No relevant conversations.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang 15000422372, who represents the Office of Structural Materials for your project.

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Inspected By: Dsouza, Christopher Quality Assurance Inspector **Reviewed By:** Carreon, Albert QA Reviewer